

Benign Paratesticular Fibrous Pseudotumor With Malignant Clinical Features

Abdelhak Khallouk, MD, Youness Ahallal, MD, Elmehdi Tazi, MD, Mohammed Fadl Tazi, MD, Mohammed Jamal Elfassi, MD, Moulay Hassan Farih, MD

Department of Urology, Centre Hospitalier Universitaire Hassan II, Fes, Morocco

Paratesticular tumors are rare intrascrotal masses that grow mainly in structures containing connective tissue around the testis, epididymis, or spermatic cord. We report here on a case of a 55-year-old man with a mass in the hemiscrotum that was found to be a paratesticular fibrous pseudotumor in the orchiectomy specimen pathologic examination. From this case report and literature review, a diagnostic and therapeutic strategy is demonstrated for the management of this uncommon lesion.

[Rev Urol. 2011;13(4):e203-e205 doi: 10.3909/riu0509]

© 2011 MedReviews®, LLC

Key words: Paratesticular fibrous pseudotumor • Epididymis • Spermatic cord • Testicular tunics

Paratesticular fibrous pseudotumor is a rare benign lesion that arises from testicular tunics and, less commonly, grows into the epididymis and spermatic cord. The epididymis is involved in less than 10% of the cases. This lesion is a consequence of a reactive proliferation of inflammatory and fibrous tissue. The initial stimulus of this reactive process may be a prior infection or trauma. The diagnosis is made on postoperative histologic examination.

Case Report

A 55-year-old man was admitted for surgical cure of symptomatic benign prostatic hyperplasia complicated with urinary bladder lithiasis. The physical examination revealed a firm, nontender, and immobile mass in the left hemiscrotum. This mass was fixed to the inferior pole of the testis and to the overlying scrotum skin. Abdominal and inguinal examination revealed no mass or palpable lymph node. The right hemiscrotum was normal.



Figure 1. Ultrasound showing a hypoechoic paratesticular mass.

Serum markers for germ cell tumors (α -fetoprotein, β -human chorionic gonadotrophin, and lactic dehydrogenase) were within normal range. Ultrasound examination showed a tissular mass underneath the inferior pole of testis together with a hydrocele. The mass was well circumscribed and heterogeneous, but globally hypoechoic relative to the testes (Figure 1). Because we suspected a neoplastic paratesticular tumor, we decided to perform a radical orchiectomy with overlying scrotal skin excision (Figure 2). On the cut section, the tumor was brown, whitish, and separated from the testis by a thickened tunica albuginea and the overlying scrotal skin was invaded (Figure 3). As the head of the epididymis was probably replaced by the process, it was not identified because, on histologic examination, the lesion was composed of paucicellular fibroblastic and myofibroblastic proliferation of cells within a hyalinized collagenous stroma with some inflammatory cells (lymphocytes).

Discussion

Paratesticular fibrous pseudotumors are uncommon reactive benign lesions of testicular tunics. This term is generally accepted, although multiple names, such as inflammatory pseudotumor, proliferative funiculitis, chronic proliferative periorchitis, fibrous mesothelioma, and reactive periorchitis, are also

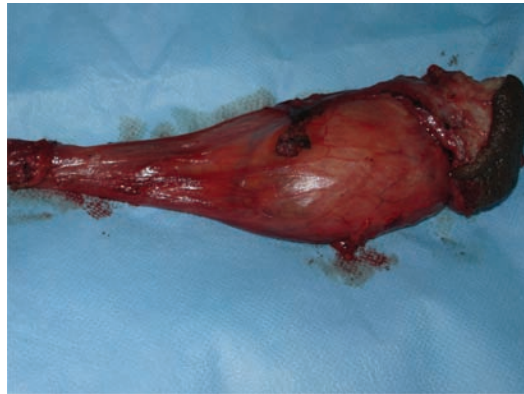


Figure 2. Radical orchiectomy specimen with the overlying scrotal skin.

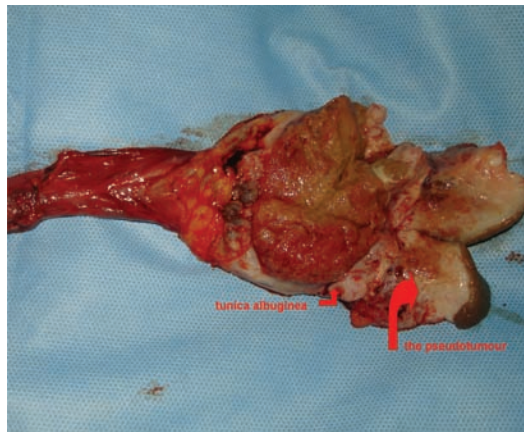


Figure 3. Cut section of the specimen showing a brown, whitish tumor separated from the testis by a thickened tunica albuginea.

assigned to this tumor.^{1,2} This case was first reported by Balloch in 1904.³⁻⁶ Most reported cases have involved the tunica vaginalis; rarely is it associated with the tunica albuginea, epididymis, or spermatic cord.^{7,8}

This tumor is one of the rarest paratesticular tumors.⁹ Williams and Banerjee reported a series of 114 paratesticular tumors, of which

is poorly understood and highly controversial. Most authors favor reactive nature at least in certain cases including a history of trauma, infection, or inflammatory hydrocele.⁷

The peak incidence of fibrous pseudotumors is in the third decade but can occur at any age. Tumor size at presentation can range from 0.5 to 8 cm.²

This tumor is one of the rarest paratesticular tumors. Williams and colleagues reported a series of 114 paratesticular tumors out of which 7 cases (0.061%) were fibrous pseudotumor. The majority arise from the tunica vaginalis.

7 cases (0.061%) were fibrous pseudotumor. The majority arise from the tunica vaginalis.¹⁰

The pathogenesis of the fibrous pseudotumors of the testicular tunics

Most patients report a history of hydrocele, trauma, or infection. In most reports, hydrocele represents the most frequently associated finding with the lesion and has been found in

nearly 50% of fibrous pseudotumor cases.⁸ Our patient had a history of hydrocele.

Our patient reports the typical clinical finding, as most patients present with a painless scrotal mass. This mass can be quite large and mimics neoplasms. Palpation often reveals single or multiple smooth circum-

stroma, with collagen bundles and calcification foci.⁷ Immunohistochemical staining will identify multiple fibroblasts, and is positive for vimentin, smooth muscle-specific actin, and common muscle actin and negative for S-100, keratin, and desmin.²

As in our case, most patients with fibrous pseudotumors undergo surgery

Palpation often reveals single or multiple smooth circumscribed nodules and rarely satellite lesions within the adnexa.

scribed nodules and rarely satellite lesions within the adnexa. However, in the present case, the patient complained of lower urinary tract symptoms, which have never been reported to be associated with paratesticular fibrous pseudotumors.¹¹

Sonographic evaluation may show either hypoechoic or hyperechoic solid mass involving the paratesticular structures. This lesion might be separated from the testes.³ On magnetic resonance imaging, it usually has low signal intensity on T1 and T2 imaging.¹²

This lesion presents grossly as multinodular, well delimited, oval, and mobile structures often with diffuse fibrosis of the tunics.¹³ Under microscopic examination, such nodes demonstrated hyalinized tissue and fibroblasts in a richly vascularized

because their mass mimics a malignancy that results in treatment by radical orchiectomy.⁷ However, scrotal exploration, frozen biopsy, and local excision of the tumor is the treatment of choice and orchiectomy might be unnecessary.³

Although these masses may be difficult to distinguish from malignancy, they behave in a benign fashion once excised.

Conclusions

Benign tumors of scrotal structures are not common. Fibrous pseudotumors are among the most rarely seen benign tumors, and two-thirds involve the testicular tunica with other scrotal structures rarely involved. Surgical exploration is usually required to rule out malignant processes. ■

References

1. Sadowski EA, Salomon CG, Wojcik EM, Albala D. Fibroma of the testicular tunics: an unusual extratesticular intrascrotal mass. *J Ultrasound Med.* 2001;20:1245-1248.
2. Parker PM, Pugliese JM, Allen RC Jr. Benign fibrous pseudotumor of tunica vaginalis testis. *Urology.* 2006;68:427:e17-e19.
3. Tobias-Machado M, Corrêa Lopes Neto A, Heloisa Simardi L, et al. Fibrous pseudotumor of tunica vaginalis and epididymis. *Urology.* 2000;56:670-672.
4. Göğüs O, Bulay O, Yurdakul T, Bedük Y. A rare scrotal mass: fibrous pseudotumor of epididymis. *Urol Int.* 1990;45:63-64.
5. Bruijnes E, Laddé BE, Dabhoiwala NF, Stukart RA. Fibrous pseudotumor of the tunica vaginalis testis. *Urol Int.* 1984;39:314-317.
6. Jones MA, Young RH, Scully RE. Benign fibromatous tumors of the testis and paratesticular region: a report of 9 cases with a proposed classification of fibromatous tumors and tumor-like lesions. *Am J Surg Pathol.* 1997;21:296-305.
7. Seethala RR, Tirkes AT, Weinstein S, et al. Diffuse fibrous pseudotumor of the testicular tunics associated with an inflamed hydrocele. *Arch Pathol Lab Med.* 2003;127:742-744.
8. Rubenstein RA, Dogra VS, Seftel AD, Resnick MI. Benign intrascrotal lesions. *J Urol.* 2004;171:1765-1772.
9. Al-Sayyad A, Cagiannos I. Fibrous pseudotumor of the epididymis and tunica vaginalis. *Can J Urol.* 2006;13:3279-3280.
10. Williams G, Banerjee R. Paratesticular tumours. *Br J Urol.* 1969;41:332-339.
11. Polsky EG, Ray C, Dubilier LD. Diffuse fibrous pseudotumor of the tunica vaginalis testis, epididymis and spermatic cord. *J Urol.* 2004;171:1625-1626.
12. al-Otaibi L, Whitman GJ, Chew FS. Fibrous pseudotumor of the epididymis. *AJR Am J Roentgenol.* 1997;168:1586.
13. Ugras S, Yesil C. Fibrous pseudotumors of tunica albuginea, tunica vaginalis and epididymis: report of two cases. *Cancer Epidemiol.* 2009;33:69-71.

Main Points

- Paratesticular fibrous pseudotumors are uncommon reactive benign lesions of testicular tunics. Diagnosis is made on postoperative histologic examination.
- Approximately two-thirds of reported cases of fibrous pseudotumors involve the tunica vaginalis; rarely it is associated with the tunica albuginea, epididymis, or spermatic cord.
- The peak incidence of fibrous pseudotumors is in the third decade but can occur at any age. Tumor size at presentation can range from 0.5 to 8 cm.
- Most patients undergo surgery because the mass mimics a malignancy, which results in treatment by radical orchiectomy. However, scrotal exploration, frozen biopsy, and local excision of the tumor is the treatment of choice and orchiectomy might be unnecessary.